

Case Report

Potentially Malignant Fibrosis of Oral Cavity--OSMF : A Case Report

Dr. Mamta Malik¹, Dr. Chalissery Elna Paul², Dr. Sanjeev Laller³, Dr. C. Vemina Paul⁴, Dr. Surender Fanan⁵

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Affiliation:

1. Senior lecturer, Department of Oral Medicine & Radiology
PDM Dental College & Research Institute, Bahadurgarh, Haryana, India.
2. Lecturer, Inaya Medical College, Riyadh, India.
3. Senior lecturer, Department of Oral Medicine & Radiology
PDM Dental College & Research Institute, Bahadurgarh, Haryana, India.
4. Post Graduate student, Department of Pedodontics & Preventive Dentistry
Mahatma Gandhi Dental College & Hospital, Jaipur, India.
5. Post Graduate student, Department of Orthodontics & Dentofacial Orthopaedics
Mahatma Gandhi Dental College & Hospital, Jaipur, India.

Corresponding Author:

Dr. Sanjeev Laller

Senior lecture of Oral Medicine & Radiology

PDM Dental College & Research Institute, Bahadurgarh, Haryana, India.

E-mail: drlallersanjeev@gmail.com

ABSTRACT

Oral submucous fibrosis (OSMF) is potentially malignant condition initially described in 1950s is commonly found in Indians and Asian population as the habit of betel chewing is common in this geographical area. It is a chronic progressive disorder with arecoline in areca nut as main etiological factor and presentation of clinical feature depends upon the stage of disease. This article presents a case report on OSMF with mini review so that understanding etiology and clinical features help in early diagnosis and the pathogenesis of malignant transformation of the disease.

Keywords: Oral submucous fibrosis, Potentially malignant, OSMF, Blanching

INTRODUCTION

Oral submucous fibrosis is a clinically benign but potentially malignant disease which affects oral cavity. OSMF is an insidious, chronic disease affecting any part of the oral cavity, and sometimes the pharynx. Occasionally it is preceded and/ or associated with vesicle formation and always associated with juxta-epithelial inflammatory reaction followed by progressive hyalinization of the lamina propria. OSMF is considered as one of the most prevalent potentially malignant condition in Indian population which is diagnosed easily but the management is still difficult and full of challenges. Burning sensation and pallor or blanching of oral mucosa with reduced mouth opening is the first and foremost diagnostic features

of OSMF. Oral physiotherapy and intralesional steroid injections with quitting of areca nut chewing habit are the most commonly followed and accepted treatment of choice. The present reviews consider it as irreversible and incurable condition but the progression can be stopped with early diagnosis and proper management.^[1,2]

CASE REPORT

A 25 years male patient came to the department and complains of burning sensation in mouth on consuming spicy food since one year. He also reported difficulty in mouth opening. Patient was chronic gutka chewer and chews 4 pouches of gutka (goldmohar) daily since 5 years. During intra-oral examination on inspection, grayish white diffuse blanching (Fig-1) was present extending from corner of the mouth till the retromolar pad area, from inner vermilion border of lip till the upper and lower labial vestibule and from palatal gingiva extending posteriorly to involve hard palate, soft palate and ventral surface of tongue (Fig-2).

On palpation inspector findings were confirmed. Vertical fibrous bands were present on buccal mucosa bilaterally at pterygomandibular raphae area. Consistency of the mucosa was firm. Soft palate showed diffuse blanching with restricted movements. Tongue movements were restricted with protrusion of 1.3 cm. Lateral movements were optimal and maximum mouth opening was 28 mm. Rest of intra oral examination revealed generalized stains and calculus with generalized gingival bleeding on probing. On the basis of case history and oral examination a provisional diagnosis of oral submucous diagnosis was put forth with differential diagnosis of; For reduced mouth

opening-Scleroderma, Rheumatoid arthritis ,Osteoarthritis and for blanching of oral mucosa-Leukoplakia,Oral lichen planus, Discoid Lupus erythematosus were given. During investigatory procedure Vital staining using Toluidine Blue and 1% acetic acid revealed equivocal stain of <25% of 2 x 2 cm with diffuse margins and smooth surface, with Chemiluminescence using Vizilite Kit revealed poorly visible aceto-white lesion measuring 1 x 2cm on left buccal mucosa with disuse margins and coarse surface texture suggestive of mild dysplasia and finally punch biopsy was done with 6X6 mm punch biopsy tool from left buccal mucosa and a soft tissue specimen measuring 0.5 x 0.5 cm approximately and greyish white in color was sent for histopathological examination. Histopathological report revealed stratified squamous epithelium overlying the connective tissue stroma. The epithelium showed hyperkeratosis, acanthosis and mild dysplastic changes like cellular and nuclear pleomorphism (Fig-3).

Underlying stroma showed dense collagenous tissue and many dilated blood vessels. A final hitopathological diagnosis given was hyperkeratosis with early submucous fibrosis and mild dysplasia. The treatment plan included Patient education and motivation, cessation of gutka and tobacco chewing habit and oral prophylaxis. Patient was prescribed Cap. Lycobeta M 2000mcg OD x 30 days with periodic recall and review. 15 days post biopsy patient was given intra lesional injection wrt buccal mucosa bilaterally (LA : Dexamethasone:Placentrix Extract = 0.5: 2: 1ml) and underwent intralesional steroid injections with satisfactory increase in mouth opening.



Figure-1: Shows blanching buccal mucosa.



Figure-2: Shows blanching of ventral surface of tongue.

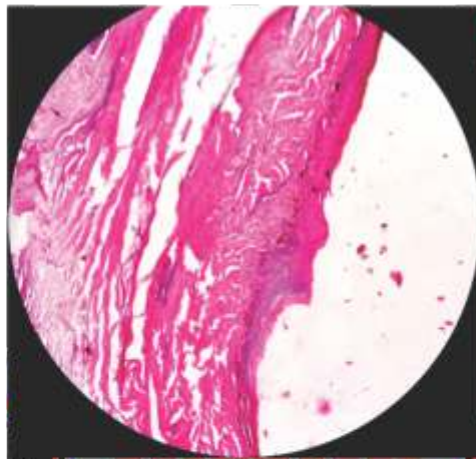


Figure-3: Shows histopathological changes in OSMF.

DISCUSSION

Oral submucous fibrosis (OSMF) is a potentially malignant condition mainly associated with chewing of betel quid having areca nut as main constituent, and it is a habit which is common among Indian population. OSMF is an insidious, chronic disease affecting any part of the oral cavity, and sometimes the pharynx. Occasionally it is preceded and/ or associated with vesicle formation and always associated with juxta-epithelial inflammatory reaction followed by progressive hyalinization of the lamina propria which

increasingly limits mouth opening. The introduction of chewing tobacco containing areca nut into the market has been associated with a marked increase in the frequency of OSMF. The amount of areca nut in betel quid and the frequency and duration of chewing betel quid are clearly related to the development of OSMF. More is the amount and frequency with long duration, sure and severe is the development of OSMF. Pathogenesis is thought to involve juxta-epithelial inflammatory reaction and fibrosis in the oral mucosa, probably due to increased

cross-linking of collagen through up-regulation of lysyl oxidase activity. Fibrosis due to the build up of collagen, results due to the effects of areca nut, which increases collagen production caused due to stimulation by arecoline, an alkaloid; and decreases collagen degradation.^[1,2,3,4]

Presentation of clinical features may vary from few months to years after the chewing habit depending upon the amount, frequency, duration and type of areca nut consumed. The clinical features of OSMF are due to inflammation and fibrosis primarily. The most common initial symptoms and signs are a burning sensation, dry mouth, blanching oral mucosa and ulceration. The burning sensation increases during consumption of chewing spicy food. Blanching of the oral mucosa is caused by impaired local vascular bed as a result of increased fibrosis and results in a marble-like appearance of oral mucosa. Blanching may be localized, diffuse or reticular. In some cases, blanching may be associated with small vesicles that rupture to form erosive lesions. Fibrosis results in thickening and increased rigidity of cheeks and thus, when a patient blows a whistle or tries to inflate a balloon, the usual puffed-out appearance of the cheeks is usually missing. Tongue shows blanching of mucosa on ventral surface and depapillation on tip. Tongue movements are also restricted due to fibrosis. Hard palate involvement includes extensively blanched mucosa. Fibrosis may extend posterior to involve the soft palate and uvula resulting in bud like shape of uvula. Gingival involvement is relatively uncommon and is characterized by fibrosis, blanching and loss of normal stippling. Hearing loss may also be seen in severe cases due to blockage of Eustachian tubes. Swallowing becomes difficult due to fibrosis of esophageal area and thus patient is unable to eat and

becomes weak with progression of disease.^[1,2,5,6,7,8]

Multiple management protocols are discussed in review of literature but till date none of the treatment modalities are found effective for complete cure of the disease. Oral physiotherapy and intralesional steroid injections with quitting of areca nut chewing habit are the most commonly followed and accepted treatment of choice. Intralesional steroids are the mainstay treatment modality. These are injected into the fibrotic bands weekly for 6–8 weeks with regular monitoring of mouth opening. Patients are advised to do mouth-opening exercises like placing ice cream sticks in their mouth and gradually increasing the number. Hyaluronidase which facilitates the breakdown of connective tissue, can be combined with the steroids for injection. Surgical intervention includes myotomy, coronoidectomy and excision of fibrotic bands, are required and the reconstruction is done using buccal pad flap, superficial temporal flap and forearm flap, can also. Other treatment options include cryosurgery, laser surgery (carbon dioxide laser), pentoxifylline, lycopene, immunized milk, interferon gamma, turmeric, hyalase, chymotrypsin and collagenase.^[5,6,7,8]

OSMF may cause atrophy of the epithelium which results in increased carcinogen penetration. Thus, OSMF do have malignant transformation. Studies reveal that untreated and uncontrolled cases have shown dysplastic changes in upto 25% of biopsy reports.^[1]

CONCLUSION

As till date no effective medical and surgical treatment options are available to control this condition, early diagnosis is the prompt treatment. Cessation of areca nut chewing should be encouraged and public health awareness programmes should be conducted to control OSMF at community level. Further research is required

to focus on various molecules and pathways involved in pathogenesis of OSMF such that morbidity and mortality rates can be effectively controlled.

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